

Total Systems

18

Calibration Summary

Returning to DWS



Customer Name: EPA Centrational Regional Lab (EPA311)

Customer Address: US Environmental Protection Agencey

Out of Service

2

Calibration Date: 6/7/2017

DWS Sales Order: 109759

City, State, Zip: Chicago, IL 60605

Not Found

Requested Due Date: 6/20/2018

As Found As Left
1 Failures: 3

Calibration Failures:

DWS ID#	Customer ID#	Location	<u>Device</u>	Serial Number	<u>Capacity</u>	As Found	As Left	DWS	
001A	16	RM 1033	Sartorius MSU324S CUBIS	26709090	320 x 0.0001 g	Pass	Pass	200 100 20	A04
								200 100 20	(9
			Comments: 16						
002A	17	RM 1033	Sartorius MSU324S CUBIS	26709091	320 x 0.0001 g	Pass	Pass		A04
								200 100 20	(g
			Comments: 17						
003A	18	RM 1003	Sartorius MSU324S CUBIS	26709092	320 x 0.0001 g	Pass	Pass		A04
								200 100 20	(g
			Comments: 18						
004A	21	RM 1036	Sartorius MSU324S CUBIS	25106130	320 x 0.0001 g	Pass	Pass		A04
								200 100 20	(g
			Comments: 21						
A800	1	RM 1035	Mettler-Toledo AB 104-S	1121330659	100 x 0.0001 g	Fail	Pass		A04
								100 50 10	(g
			Comments: CHAMBER TOP GLASS						
009A	4	RM 1016	Mettler-Toledo AG285	1120181846	210 x 0.0001 g				A04
									(g
	ıt of Service		Comments: N/F 6/2015 AG						
011A	6	RM 1003	Mettler-Toledo AG285	1120181838	210 x 0.0001 g				A04
									(g
	ıt of Service	DM 4007	Comments: 6	4400040044	440 0 0004				A04
014A	7	RM 1007	Mettler-Toledo AX105	1122310644	110 x 0.0001 g	Pass	Pass		AU4
								100 50 10	(g)
			Comments: 7						
017A	784	RM 1014	Mettler-Toledo PM2000	H43784	2100 x 0.01 g	Fail	Pass		A04
								2000 1000 100	(g)
			Comments: 784						

Summary 1 of 2

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007

DWS ID#	Customer ID#	<u>Location</u>	<u>Device</u>	Serial Number	<u>Capacity</u>	As Found	As Left	DWS Note
018A	8	RM 1033	A&D HF2000	12840548	2100 x 0.01 g	Fail	Pass	A04
								2000 1000 100 (g
			Comments: 8					
019A	10	RM 1010	A&D GX400	14525320	410 x 0.001 g	Pass	Pass	A04
								400 200 50 (g
			Comments: 10					
020A	94	RM 1014	METTLER TOLED0 XA32	2001LB136224094	32100 x 0.1 g	Pass	Pass	30000 10000 5000 (g
			Comments: 94					
024A	22	RM 1014	Mettler-Toledo PM400	L72332	400 x 0.01 g	Pass	Pass	A04
								400 200 50 (g
			Comments: 22					
026A	12	RM 1004	Sartorius CPA124S	26650025	120 x 0.0001 g	Pass	Pass	A04
								100 50 10 (g
			Comments: 12					
027A	13	RM 1004	Sartorius CPA124S	25150424	120 x 0.0001 g	Pass	Pass	A04
								100 50 10 (g
			Comments: 13					
028A	26		Sartorius Secura224-1S	32150046	220 x 0.0001 g	Pass	Pass	A04
								200 100 20 (g
			Comments: RM 1014					
029A	25		Sartorius Secura224-1S	32050346	220 x 0.0001 g	Pass	Pass	A04
								200 100 20 (g
			Comments: RM 1014					
030A			Sartorius MSE2202S-100	-00 33110477	2200 x 0.01 g	Pass	Pass	A04
								2000 1000 100 (g
			Comments: RM 1033					

Summary 2 of 2

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007





Certificate Number: 42902406-1 DWS Sales Order: 109759

Customer Name: EPA Centrational Regional Lab **Test Location: Customer Site**

US Environmental Protection Agencey Customer Address:

Calibration Procedure: A04L

Chicago, IL 60605

Calibration Date: 06/07/17

EPA311 Customer Code:

Device Location: RM 1033 6/20/2018

Customer Equipment

DWS ID# Customer ID# Type of Device Manufacturer Model

Serial Number

Capacity

001A 16

Device Under Test:

Sartorius

MSU324S CUBIS

26709090

320 x 0.0001 g

Span	<u>l est</u>
Tact I	nad

ad	Tolerance	As Found	<u>Status</u>	As Left	Status	+/- (Uc) K=2(≈95%)
g	0.002 g	199.9999 g	Pass	199.9999 g	Pass	0.0013 g
g	0.001 g	100 g	Pass	100 g	Pass	0.0008 g *
g	0.0002 g	20 g	Pass	20 g	Pass	0.0008 g *

DWS Best Scope Uc value utilized

Tolerance: +/- 0.001% of applied load or +/- Resolution (x2), which ever is greater

Off-	Cen	ter I	_oad	Test

Test Load: 100 g Tolerance: 0.001 g As Found As Left 0.0000 g 0.0000 g 2 0.0000 g 0.0000 g 0.0001 g 0.0001 g 3 0.0000 g 0.0000 g Max Error Max Error 0.0001 g 0.0001 q

Status

Pass

3

Status

Pass

Repeatability Test Test Load: 100 g

> As Left 100.0000 g 2 100.0000 g 100.0000 g

> > Standard Deviation 0 g

DWS Standards Utilized

Serial Number Certificate Last Cal Next Cal 094K 2533150C 01/25/17 01/31/18 0U2T 2564892F 03/20/17 03/31/19 S5000 2555591A 02/27/17 02/28/18 2397243A 02/09/16 02/28/18 1GEC

Data Weighing Systems certifies the following equipment was tested and calibrated with standards traceable through NIST to the International System of Units (SI). Subject standards meet the tolerance requirements ASTM E617 (Table 1.0), or NIST HB 105-1 (Table 2-Metric), (Table 3-Avoirdupois) or (Table 4-Apothecary). The determination of a Pass/Fail condition is the opinion of DWS based on experience and established procedures. Measurement Uncertainty is not considered in this determination. Measurement Uncertainty K=2 (≈95%). This form not to be duplicated without written permission of DWS.

Calibration performed, verified functionality and adjusted as appropriate for measurement errors.

Technician Comment: Equipment Comment: 16

DWS seeks your feedback, please email our quality department: quality@dataweigh.com

Adrian Garcia DWS Calibration Technician(s): **DWS Quality Manager** or deligate, review and approval:

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007





Calibration Certificate

42902406-2 Certificate Number:

EPA Centrational Regional Lab

US Environmental Protection Agencey Customer Address:

Chicago, IL 60605

Customer Code: **EPA311**

Device Location: RM 1033

Customer Equipment

DWS ID# Customer ID#

Type of Device Device Under Test: Manufacturer Sartorius

Status

Model

+/- (Uc) K=2(≈95%)

Serial Number MSU324S CUBIS

26709091

DWS Sales Order: 109759

Calibration Date: 06/07/17

Calibration Procedure: A04L

Test Location: Customer Site

6/20/2018

320 x 0.0001 g

Next Cal

01/31/18

03/31/19

Capacity

Span Test Test Load

002A

COL EGGG	1010101100
200 g	0.002 g
100 g	0.001 g

20 g 0.0002 g

Tolerance

17

199.9998 g 100 g 20 g

As Found

Pass **Pass Pass**

200 q Pass 100 g **Pass** Pass 20 g

As Left

0.0013 a 0.0008 g 0.0008 g

DWS Best Scope Uc value utilized

Tolerance: +/- 0.001% of applied load or +/- Resolution (x2), which ever is greater

Off-Center Load Test				
	Off-	Cente	r Loac	l Test

Test Load: 100 g Tolerance: 0.001 g As Left As Found 0.0000 g 0.0000 g 2 0.0000 g 0.0000 g 0.0000 g 0.0000 g 3 0.0000 g 0.0000 g

Max Error 0.0000 a Status Pass

Max Error 0.0000 q Status **Pass** 3

Repeatability Test Test Load: 100 g

> As Left 100.0000 g 2 99.9999 g

> > Standard Deviation 0.00005774 g

100.0000 g

DWS Standards Utilized

Serial Number Certificate Last Cal 094K 2533150C 01/25/17 0U2T 2564892F 03/20/17 S5000 2555591A 02/27/17

02/28/18 02/09/16 02/28/18 1GEC 2397243A

Data Weighing Systems certifies the following equipment was tested and calibrated with standards traceable through NIST to the International System of Units (SI). Subject standards meet the tolerance requirements ASTM E617 (Table 1.0), or NIST HB 105-1 (Table 2-Metric), (Table 3-Avoirdupois) or (Table 4-Apothecary). The determination of a Pass/Fail condition is the opinion of DWS based on experience and established procedures. Measurement Uncertainty is not considered in this determination. Measurement Uncertainty K=2 (≈95%). This form not to be duplicated without written permission of DWS.

Calibration performed, verified functionality and adjusted as appropriate for measurement errors.

Technician Comment: Equipment Comment: 17

DWS seeks your feedback, please email our quality department: quality@dataweigh.com

Adrian Garcia DWS Calibration Technician(s): **DWS Quality Manager**

or deligate, review and approval:

lun OThe

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007 Calibration: 1 (847) 437-8106

Sales: 1 (800) 397-6301 Website: www.dataweight.com





Calibration Certificate

42902406-3 Certificate Number:

EPA Centrational Regional Lab

US Environmental Protection Agencey Customer Address:

Chicago, IL 60605

Customer Code: **EPA311**

Device Location: RM 1003

Customer Equipment

DWS ID# Customer ID#

18

Type of Device

Device Under Test:

Manufacturer

Sartorius

Model MSU324S CUBIS

26709092

Serial Number

DWS Sales Order: 109759

Calibration Date: 06/07/17

Calibration Procedure: A04L

Test Location: Customer Site

6/20/2018

320 x 0.0001 g

Capacity

Span Test Test Load

003A

0.002 g 200 q 0.001 g 100 g 20 g

0.0002 g

Tolerance

100 g 20 g

As Found

200.0001 g

Tolerance: 0.001 g

Pass **Pass** Pass

200 a Pass 100 g **Pass** Pass 20 g

Status

As Left

0.0013 a 0.0008 g 0.0008 g

+/- (Uc) K=2(≈95%)

DWS Best Scope Uc value utilized

Tolerance: +/- 0.001% of applied load or +/- Resolution (x2), which ever is greater

Off-Center Load Test

Test Load: 100 g

As Found As Left 0.0000 g 0.0000 g 2 0.0000 g 0.0000 g 0.0000 g 0.0000 g 3 0.0000 g 0.0000 g

Max Error 0.0000 a

Max Error 0.0000 q Status Status Pass **Pass** 3

Repeatability Test Test Load: 100 g

> As Left 100.0000 g 2 100.0000 g 100.0001 g

> > Standard Deviation 0.00005774 g

DWS Standards Utilized

1GEC

Serial Number Certificate 094K 2533150C 0U2T 2564892F S5000 2555591A

2397243A

01/25/17 03/20/17 02/27/17 02/09/16

Last Cal

Next Cal

01/31/18

03/31/19

02/28/18

02/28/18

Data Weighing Systems certifies the following equipment was tested and calibrated with standards traceable through NIST to the International System of Units (SI). Subject standards meet the tolerance requirements ASTM E617 (Table 1.0), or NIST HB 105-1 (Table 2-Metric), (Table 3-Avoirdupois) or (Table 4-Apothecary). The determination of a Pass/Fail condition is the opinion of DWS based on experience and established procedures. Measurement Uncertainty is not considered in this determination. Measurement Uncertainty K=2 (≈95%). This form not to be duplicated without written permission of DWS.

Calibration performed, verified functionality and adjusted as appropriate for measurement errors.

Technician Comment: Equipment Comment: 18

DWS seeks your feedback, please email our quality department: quality@dataweigh.com

DWS Calibration Technician(s):

Adrian Garcia

DWS Quality Manager or deligate, review and approval:

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007





Calibration Certificate

42902406-4 Certificate Number:

EPA Centrational Regional Lab

US Environmental Protection Agencey Customer Address:

Chicago, IL 60605

Customer Code: **EPA311**

Device Location: RM 1036

Customer Equipment

DWS ID# Customer ID#

Type of Device

Device Under Test:

Manufacturer Sartorius

Status

Pass

Model

MSU324S CUBIS

Serial Number 25106130

DWS Sales Order: 109759

Calibration Date: 06/07/17

Calibration Procedure: A04L

Test Location: Customer Site

6/20/2018

320 x 0.0001 g

Next Cal

01/31/18

03/31/19

02/28/18

02/28/18

Capacity

Span Test Test Load

004A

200 q 0.002 g 0.001 g 100 g 20 g

0.0002 g

21

Tolerance

200.0001 a Pass 99.9997 g 20 g

As Found

Pass Pass 100 g **Pass** Pass 20 g

As Left

200 a

0.0008 g 0.0008 g

+/- (Uc) K=2(≈95%)

0.0013 a

DWS Best Scope Uc value utilized

Tolerance: +/- 0.001% of applied load or +/- Resolution (x2), which ever is greater

Off-Center	Load	Test
Test Lo	ad:	100 g

Tolerance: 0.001 g As Left As Found 0.0000 g 0.0000 g 2 0.0000 g 0.0000 g 0.0001 g 0.0000 g 3 0.0000 g 0.0000 g Max Error

Max Error 0.0001 a Status Pass

0.0000 q Status **Pass**

3

Repeatability Test Test Load: 100 g

As Left 100.0000 g 2 100.0000 g 100.0000 g

Standard Deviation

DWS Standards Utilized

Serial Number Certificate Last Cal 094K 2533150C 01/25/17 0U2T 2564892F 03/20/17 S5000 2555591A 02/27/17 02/09/16 1GEC 2397243A

0 g

Data Weighing Systems certifies the following equipment was tested and calibrated with standards traceable through NIST to the International System of Units (SI). Subject standards meet the tolerance requirements ASTM E617 (Table 1.0), or NIST HB 105-1 (Table 2-Metric), (Table 3-Avoirdupois) or (Table 4-Apothecary). The determination of a Pass/Fail condition is the opinion of DWS based on experience and established procedures. Measurement Uncertainty is not considered in this determination. Measurement Uncertainty K=2 (≈95%). This form not to be duplicated without written permission of DWS.

Calibration performed, verified functionality and adjusted as appropriate for measurement errors.

Technician Comment: Equipment Comment: 21

DWS seeks your feedback, please email our quality department: quality@dataweigh.com

Adrian Garcia DWS Calibration Technician(s):

DWS Quality Manager or deligate, review and approval:

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007



FAIL CONDITIONS RECORDED Calibration Certificate



Certificate Number: 42902406-5 DWS Sales Order: 109759

Customer Name: EPA Centrational Regional Lab Test Location: Customer Site

Customer Address: US Environmental Protection Agencey Calibration Procedure: A04L

Chicago, IL 60605 Calibration Date: 06/07/17

Customer Code: EPA311 6/20/2018

Device Location: RM 1035

Customer Equipment

<u>DWS ID#</u> <u>Customer ID#</u> <u>Type of Device</u> <u>Manufacturer</u> <u>Model</u> <u>Serial Number</u> <u>Capacity</u>

008A 1 Device Under Test: Mettler-Toledo AB 104-S 1121330659 100 x 0.0001 g

Span Test							
Test Load	<u>Tolerance</u>	As Found	<u>Status</u>	As Left	<u>Status</u>	+/- (Uc) K=2(≈95%)	
100 g	0.001 g	99.9981 g	Fail	100.0001 g	Pass	0.0008 g	f
50 g	0.0005 g	49.9996 g	Pass	50 g	Pass	0.0008 g	f
10 g	0.0002 g	9.9999 g	Pass	10 g	Pass	0.0008 g	f

* DWS Best Scope Uc value utilized

Tolerance: +/- 0.001% of applied load or +/- Resolution (x2), which ever is greater

Off-Cen	ter Load Test			Repeatability Test	1			
Tes	t Load: 50 g	Tolerance: 0.0	005 g	Test Load: 50 g	DWS Standards Ut	tilized		
				-	Serial Number	Certificate	Last Cal	Next Cal
	As Found	As Left	3	As Left	094K	2533150C	01/25/17	01/31/18
1	0.0000 g	0.0000 g)	1 50.0000 g	0U2T	2564892F	03/20/17	03/31/19
2	0.0000 g	0.0000 g	2 4	2 50.0001 g	S5000	2555591A	02/27/17	02/28/18
3	0.0000 g	0.0000 g	_ 1 /	3 50.0000 g	1GEC	2397243A	02/09/16	02/28/18
4	0.0000 g	0.0000 g	_					
	Max Error	Max Error	3 4					
	0.0000 g	0.0000 g		Standard Deviation				
	Status	<u>Status</u>		0.00005774 g				
	Pass	Pass	2 1	_				
		-		•	•			

Data Weighing Systems certifies the following equipment was tested and calibrated with standards traceable through NIST to the International System of Units (SI). Subject standards meet the tolerance requirements ASTM E617 (Table 1.0), or NIST HB 105-1 (Table 2-Metric), (Table 3-Avoirdupois) or (Table 4-Apothecary). The determination of a Pass/Fail condition is the opinion of DWS based on experience and established procedures. Measurement Uncertainty is not considered in this determination. Measurement Uncertainty K=2 (≈95%). This form not to be duplicated without written permission of DWS.

Calibration performed, verified functionality and adjusted as appropriate for measurement errors.

Technician Comment: CHAMBER TOP GLASS BROKEN

Equipment Comment: 1

DWS seeks your feedback, please email our quality department: quality@dataweigh.com

DWS Calibration Technician(s):

Adrian Garcia

DWS Quality Manager or deligate, review and approval:

DWS Quality Manager or deligate, review and approval:

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007

Page 1 of



Calibration: 1 (847) 437-8106

Unit Out of Service-Remove



Sales: 1 (800) 397-6301

Certificate Number: **Out of Service** DWS Sales Order: 109759 **Customer Name: EPA Centrational Regional Lab Test Location: Customer Site Customer Address: US Environmental Protection Agencey** Chicago, IL 60605 Date: 06/07/17 Customer Code: **EPA311 Device Location:** RM 1016 **Customer Equipment** DWS ID# Type of Device Customer ID# Serial Number Manufacturer <u>Model</u> Capacity 4 009A Mettler-Toledo AG285 1120181846 210 x 0.0001 g Device Under Test: **Technician Comment:** Equipment Comment: N/F 6/2015 AG DWS seeks your feedback, please email our quality department: quality@dataweigh.com DWS Calibration Technician(s): **REVIEW NOT PERFORMED** Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007

Website: www.dataweight.com



Calibration: 1 (847) 437-8106

Unit Out of Service-Remove



Sales: 1 (800) 397-6301

Certificate Number: **Out of Service** DWS Sales Order: 109759 **Customer Name: EPA Centrational Regional Lab Test Location: Customer Site Customer Address: US Environmental Protection Agencey** Date: 06/07/17 Chicago, IL 60605 Customer Code: **EPA311 Device Location:** RM 1003 **Customer Equipment** DWS ID# Type of Device Customer ID# Serial Number Manufacturer <u>Model</u> Capacity 6 011A Mettler-Toledo AG285 1120181838 210 x 0.0001 g Device Under Test: **Technician Comment: Equipment Comment: 6** DWS seeks your feedback, please email our quality department: quality@dataweigh.com DWS Calibration Technician(s): **REVIEW NOT PERFORMED** Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007

Website: www.dataweight.com





Calibration Certificate

Certificate Number: 42902406-8

EPA Centrational Regional Lab

US Environmental Protection Agencey Customer Address:

Chicago, IL 60605

Customer Code: **EPA311**

Device Location: RM 1007

Customer Equipment

DWS ID#

Customer ID#

7

Type of Device

Manufacturer

Device Under Test:

Mettler-Toledo

Model AX105

1122310644

DWS Sales Order: 109759

Calibration Date: 06/07/17

Serial Number

Calibration Procedure: A04L

Test Location: Customer Site

6/20/2018

Capacity 110 x 0.0001 g

Span Test

014A

est Load	rolerance
100 g	0.001 g
50 g	0.0005 g

10 g

0.0002 g

99,9999 a 50 g 10 g

As Found

Pass Pass

Status

Pass

99.9999 g Pass 50 g 10 g

As Left

Pass Pass

Status

0.0008 a0.0008 g 0.0008 g

+/- (Uc) K=2(≈95%)

DWS Best Scope Uc value utilized

Tolerance: +/- 0.001% of applied load or +/- Resolution (x2), which ever is greater

Off-	Cen	ter I	_oad	Test

Test Load: 50 g Tolerance: 0.0005 g As Found As Left 0.0000 g 0.0000 g 2 0.0001 g 0.0001 g 0.0001 g 0.0001 g 3 0.0001 g

0.0001 g Max Error 0.0001 a

Max Error 0.0001 q Status Status Pass

Pass

3

Repeatability Test Test Load: 50 g

> As Left 50.0001 g 2 50.0000 g

> > Standard Deviation 0.00005774 g

50.0001 g

DWS Standards Utilized

1GEC

Serial Number Certificate Last Cal 094K 2533150C 0U2T 2564892F S5000 2555591A

2397243A

01/25/17 01/31/18 03/20/17 03/31/19 02/27/17 02/28/18 02/09/16 02/28/18

Next Cal

Data Weighing Systems certifies the following equipment was tested and calibrated with standards traceable through NIST to the International System of Units (SI). Subject standards meet the tolerance requirements ASTM E617 (Table 1.0), or NIST HB 105-1 (Table 2-Metric), (Table 3-Avoirdupois) or (Table 4-Apothecary). The determination of a Pass/Fail condition is the opinion of DWS based on experience and established procedures. Measurement Uncertainty is not considered in this determination. Measurement Uncertainty K=2 (≈95%). This form not to be duplicated without written permission of DWS.

Calibration performed, verified functionality and adjusted as appropriate for measurement errors.

Technician Comment: Equipment Comment: 7

DWS seeks your feedback, please email our quality department: quality@dataweigh.com

Adrian Garcia DWS Calibration Technician(s): **DWS Quality Manager** or deligate, review and approval:

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007

Sales: 1 (800) 397-6301

Calibration: 1 (847) 437-8106 Website: www.dataweight.com

FAIL CONDITIONS RECORDED

Calibration Certificate

Certificate Number: 42902406-9 DWS Sales Order: 109759

Customer Name: EPA Centrational Regional Lab Test Location: Customer Site

Customer Address: US Environmental Protection Agencey Calibration Procedure: A04L

Chicago, IL 60605 Calibration Date: 06/07/17

Customer Code: EPA311 6/20/2018

Device Location: RM 1014

Customer Equipment

 DWS ID#
 Customer ID#
 Type of Device
 Manufacturer
 Model
 Serial Number
 Capacity

 017A
 784
 Device Under Test:
 Mettler-Toledo
 PM2000
 H43784
 2100 x 0.01 g

Span Test						
Test Load	Tolerance	As Found	<u>Status</u>	As Left	<u>Status</u>	+/- (Uc) K=2(≈95%)
2000 g	0.02 g	2000.03 g	Fail	2000 g	Pass	0.0310 g *
1000 g	0.02 g	1000.02 g	Pass	1000 g	Pass	0.0310 g *
100 a	0.02 a	100 a	Pass	100 a	Page	0.0310 a *

* DWS Best Scope Uc value utilized

Tolerance: +/- 0.001% of applied load or +/- Resolution (x2), which ever is greater

Off-Cent	er Load Test			Repea	atability Test				
Test	Load: 1000 g	Tolerance:	0.02 g	Test L	oad: 1000 g	DWS Standards Ut	ilized		
						Serial Number	Certificate	Last Cal	Next Cal
	As Found	As Left	3		As Left	094K	2533150C	01/25/17	01/31/18
1	0.00 g	0.00 g		1	1000.00 g	0U2T	2564892F	03/20/17	03/31/19
2	0.00 g	0.00 g	2 4	2	1000.00 g	S5000	2555591A	02/27/17	02/28/18
3	0.00 g	0.00 g	$\setminus 1$	3	1000.00 g	1GEC	2397243A	02/09/16	02/28/18
4	0.00 g	0.00 g	_						
	Max Error	Max Error	3 4						
	0.00 g	0.00 g			Standard Deviation				
	<u>Status</u>	<u>Status</u>			0 g				
	Pass	Pass	2 1						
			-	•		•			

Data Weighing Systems certifies the following equipment was tested and calibrated with standards traceable through NIST to the International System of Units (SI). Subject standards meet the tolerance requirements ASTM E617 (Table 1.0), or NIST HB 105-1 (Table 2-Metric), (Table 3-Avoirdupois) or (Table 4-Apothecary). The determination of a Pass/Fail condition is the opinion of DWS based on experience and established procedures. Measurement Uncertainty is not considered in this determination. Measurement Uncertainty K=2 (≈95%). This form not to be duplicated without written permission of DWS.

Calibration performed, verified functionality and adjusted as appropriate for measurement errors.

Technician Comment:

Equipment Comment: 784

DWS seeks your feedback, please email our quality department: quality@dataweigh.com

DWS Calibration Technician(s):

Adrian Garcia

DWS Quality Manager
or deligate, review and approval:

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007

Page 1 of 1



FAIL CONDITIONS RECORDED Calibration Certificate



Test Location: Customer Site

6/20/2018

Calibration Procedure: A04L

Calibration Date: 06/07/17

42902406-10 DWS Sales Order: 109759 Certificate Number:

Customer Name: EPA Centrational Regional Lab

US Environmental Protection Agencey Customer Address:

Chicago, IL 60605

EPA311 Customer Code:

Device Location: RM 1033

Customer Equipment

DWS ID# Type of Device Customer ID# Manufacturer Model Serial Number Capacity

018A 8 A&D HF2000 12840548 2100 x 0.01 g Device Under Test:

Span Test							
Test Load	Tolerance	As Found	<u>Status</u>	As Left	<u>Status</u>	+/- (Uc) K=2(≈95%)	
2000 g	0.02 g	1999.74 g	Fail	1999.99 g	Pass	0.0310 g	*
1000 g	0.02 g	999.86 g	Fail	1000 g	Pass	0.0310 g	*
100 g	0.02 g	99.98 g	Pass	100 g	Pass	0.0310 g	*

DWS Best Scope Uc value utilized

Sales: 1 (800) 397-6301

Tolerance: +/- 0.001% of applied load or +/- Resolution (x2), which ever is greater

Off-Ce	nter Load Test				Repea	tability Test	1			
Te	est Load: 1000 g	Tolerance:	0.02 g		Test Lo	oad: 1000 g	DWS Standards Ut	ilized		
	_		_			_	Serial Number	Certificate	Last Cal	Next Cal
	As Found	As Left		3		As Left	094K	2533150C	01/25/17	01/31/18
1	-0.01 g	0.00 g	ſ		1	1000.00 g	0U2T	2564892F	03/20/17	03/31/19
2	0.01 g	0.00 g	2	4	2	1000.00 g	S5000	2555591A	02/27/17	02/28/18
3	0.03 g	0.01 g		1 /	3	1000.00 g	1GEC	2397243A	02/09/16	02/28/18
4	0.02 g	0.01 g	_	_						
	Max Error	Max Error	3	4						
	0.03 g	0.01 g				Standard Deviation				
	<u>Status</u>	<u>Status</u>				0 g				
	Fail	Pass	2	1						
				•	•		•			

Data Weighing Systems certifies the following equipment was tested and calibrated with standards traceable through NIST to the International System of Units (SI). Subject standards meet the tolerance requirements ASTM E617 (Table 1.0), or NIST HB 105-1 (Table 2-Metric), (Table 3-Avoirdupois) or (Table 4-Apothecary). The determination of a Pass/Fail condition is the opinion of DWS based on experience and established procedures. Measurement Uncertainty is not considered in this determination. Measurement Uncertainty K=2 (≈95%). This form not to be duplicated without written permission of DWS.

Calibration performed, verified functionality and adjusted as appropriate for measurement errors.

Technician Comment: Equipment Comment: 8

Calibration: 1 (847) 437-8106

DWS seeks your feedback, please email our quality department: quality@dataweigh.com

DWS Calibration Technician(s):	Adrian Garcia	DWS Quality Manager or deligate, review and approval:	Stan O'There
-		_	Page 1 of 1

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007 Website: www.dataweight.com





Calibration Certificate

42902406-11 Certificate Number:

EPA Centrational Regional Lab

US Environmental Protection Agencey Customer Address:

Chicago, IL 60605

Customer Code: **EPA311**

Device Location: RM 1010

Customer Equipment

DWS ID# Customer ID#

10

Type of Device

Device Under Test:

Manufacturer

A&D

Model **GX400**

Serial Number 14525320

DWS Sales Order: 109759

Calibration Date: 06/07/17

Calibration Procedure: A04L

Test Location: Customer Site

6/20/2018

410 x 0.001 g

Capacity

Span Test

019A

Test Load **Tolerance** 400 g 0.004 a200 g

0.002 g 0.002 g

400.001 q Pass 200 g 49.999 g

As Found

Pass Pass

<u>Status</u>

200 g 50 g

As Left

400 q

Pass Pass

Status

Pass

0.0031 a 0.0021 g

0.0017 g

+/- (Uc) K=2(≈95%)

Tolerance: +/- 0.001% of applied load or +/- Resolution (x2), which ever is greater

Off-Center Load Tes

50 g

Test Load: 200 g Tolerance: 0.002 g As Found As Left -0.001 g -0.001 g 2 0.002 g 0.002 g 0.002 g 0.002 g 3

0.001 g Max Error $0.002 \, a$ Status

Pass

Max Error 0.002 q Status **Pass**

0.001 g

3

Repeatability Test Test Load: 200 g

> As Left 200.001 g 2 200.000 g

> > Standard Deviation 0.0005774 g

200.000 g

DWS Standards Utilized

1GEC

Serial Number Certificate Last Cal 094K 2533150C 01/25/17 0U2T 2564892F S5000 2555591A

2397243A

01/31/18 03/20/17 03/31/19 02/27/17 02/28/18 02/09/16 02/28/18

Next Cal

Data Weighing Systems certifies the following equipment was tested and calibrated with standards traceable through NIST to the International System of Units (SI). Subject standards meet the tolerance requirements ASTM E617 (Table 1.0), or NIST HB 105-1 (Table 2-Metric), (Table 3-Avoirdupois) or (Table 4-Apothecary). The determination of a Pass/Fail condition is the opinion of DWS based on experience and established procedures. Measurement Uncertainty is not considered in this determination. Measurement Uncertainty K=2 (≈95%). This form not to be duplicated without written permission of DWS.

Calibration performed, verified functionality and adjusted as appropriate for measurement errors.

Technician Comment: Equipment Comment: 10

DWS seeks your feedback, please email our quality department: quality@dataweigh.com

Adrian Garcia DWS Calibration Technician(s): **DWS Quality Manager** or deligate, review and approval:

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007





Certificate Number: 42902406-12 DWS Sales Order: 109759

Customer Name: EPA Centrational Regional Lab **Test Location: Customer Site**

US Environmental Protection Agencey Customer Address:

Calibration Procedure: A04L

Chicago, IL 60605

Calibration Date: 06/07/17

Customer Code: **EPA311**

Device Location: RM 1014 6/20/2018

Customer Equipment

Customer ID# DWS ID#

Type of Device Manufacturer

Model

Serial Number

Capacity

020A 94

Device Under Test: **METTLER TOLED(**

XA32001L

B136224094

32100 x 0.1 g

_	
Span	Test
Toot	Lood

	<u>+/- (Uc) K=2(≈95%)</u>	<u>Status</u>	<u>As Left</u>	<u>Status</u>	As Found	<u>Tolerance</u>	Test Load
*	0.3000 g	Pass	30000 g	Pass	30000.1 g	0.3 g	30000 g
*	0.3000 g	Pass	10000 g	Pass	10000 g	0.2 g	10000 g
*	0.3000 g	Pass	5000 g	Pass	5000 g	0.2 g	5000 g

DWS Best Scope Uc value utilized

Tolerance: +/- 0.001% of applied load or +/- Resolution (x2), which ever is greater

Off-	Cen	ter l	Load	Tes
•				

Test Load: 10000 g Tolerance: 0.2 g As Found As Left 0.0 g 0.0 g 2 0.0 g 0.0 g 0.0 g 3 0.0 g 0.0 g 0.0 g Max Error Max Error $0.0 \, q$ $0.0 \, q$ Status Status Pass **Pass**

3

Repeatability Test Test Load: 10000 g

> As Left 10000.0 g 2 10000.0 g 10000.0 g

> > Standard Deviation 0 g

DWS Standards Utilized

Serial Number Certificate Last Cal Next Cal 094K 2533150C 01/25/17 01/31/18 0U2T 2564892F 03/20/17 03/31/19 \$5000 2555591A 02/27/17 02/28/18 02/09/16 02/28/18 1GEC 2397243A

Data Weighing Systems certifies the following equipment was tested and calibrated with standards traceable through NIST to the International System of Units (SI). Subject standards meet the tolerance requirements ASTM E617 (Table 1.0), or NIST HB 105-1 (Table 2-Metric), (Table 3-Avoirdupois) or (Table 4-Apothecary). The determination of a Pass/Fail condition is the opinion of DWS based on experience and established procedures. Measurement Uncertainty is not considered in this determination. Measurement Uncertainty K=2 (≈95%). This form not to be duplicated without written permission of DWS.

Calibration performed, verified functionality and adjusted as appropriate for measurement errors.

Technician Comment:

Equipment Comment: 94

DWS seeks your feedback, please email our quality department: quality@dataweigh.com

DWS Calibration Technician(s):

Adrian Garcia

DWS Quality Manager

or deligate, review and approval:

Page 1 of 1

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007 Calibration: 1 (847) 437-8106

Website: www.dataweight.com

Sales: 1 (800) 397-6301





Calibration Certificate

42902406-13 Certificate Number:

EPA Centrational Regional Lab

US Environmental Protection Agencey Customer Address:

Chicago, IL 60605

EPA311 Customer Code:

Device Location: RM 1014

22

Customer Equipment

DWS ID#

Customer ID#

Type of Device

Device Under Test:

Manufacturer Mettler-Toledo Model PM400 Serial Number

L72332

DWS Sales Order: 109759

Calibration Date: 06/07/17

Calibration Procedure: A04L

Test Location: Customer Site

6/20/2018

Capacity 400 x 0.01 g

Span Test

024A

Test Load **Tolerance** 400 g $0.02 \, a$ 0.02 g 200 g

50 g 0.02 g

As Found 400 g 200 g 50 g

Tolerance: 0.02 g

Pass **Pass** Pass

<u>Status</u>

400 q 200 g 50 g

As Left

Pass **Pass** Pass

Status

0.0119 a 0.0116 g 0.0116 g

+/- (Uc) K=2(≈95%)

Tolerance: +/- 0.001% of applied load or +/- Resolution (x2), which ever is greater

Off-Center Load Test Test Load: 200 g

As Found As Left 0.00 g 0.00 g 2 0.01 g 0.01 g -0.01 g -0.01 g 3 0.00 g

Pass

Max Error $0.01 \, a$ Status

0.00 g Max Error 0.01 q Status **Pass** 3

Repeatability Test Test Load: 200 g

> As Left 200.00 g 2 200.00 g 200.00 g

> > Standard Deviation 0 g

DWS Standards Utilized

1GEC

Serial Number Certificate Last Cal 094K 2533150C 0U2T 2564892F S5000 2555591A

2397243A

01/25/17 01/31/18 03/20/17 03/31/19 02/27/17 02/28/18 02/09/16 02/28/18

Next Cal

Data Weighing Systems certifies the following equipment was tested and calibrated with standards traceable through NIST to the International System of Units (SI). Subject standards meet the tolerance requirements ASTM E617 (Table 1.0), or NIST HB 105-1 (Table 2-Metric), (Table 3-Avoirdupois) or (Table 4-Apothecary). The determination of a Pass/Fail condition is the opinion of DWS based on experience and established procedures. Measurement Uncertainty is not considered in this determination. Measurement Uncertainty K=2 (≈95%). This form not to be duplicated without written permission of DWS.

Calibration performed, verified functionality and adjusted as appropriate for measurement errors.

Technician Comment: Equipment Comment: 22

DWS seeks your feedback, please email our quality department: quality@dataweigh.com

Adrian Garcia DWS Calibration Technician(s):

DWS Quality Manager

or deligate, review and approval:

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007

Calibration: 1 (847) 437-8106 Website: www.dataweight.com

Sales: 1 (800) 397-6301





42902406-14 Certificate Number:

DWS Sales Order: 109759

Customer Name: EPA Centrational Regional Lab **Test Location: Customer Site**

US Environmental Protection Agencey Customer Address:

Calibration Procedure: A04L

Chicago, IL 60605

Calibration Date: 06/07/17

EPA311 Customer Code:

Device Location: RM 1004 6/20/2018

Customer Equipment

Customer ID# DWS ID#

Type of Device

Manufacturer

Model

Serial Number

Capacity

026A 12

Device Under Test:

Sartorius

CPA124S

26650025

120 x 0.0001 g

<u>Sp</u>	an Test							
Τe	est Load	Tolerance	As Found	<u>Status</u>	As Left	<u>Status</u>	+/- (Uc) K=2(≈95%)	
	100 g	0.001 g	100.0001 g	Pass	100 g	Pass	0.0008 g	*
	5 0 g	0.0005 g	50 g	Pass	50 g	Pass	0.0008 g	*
	10 a	0.0002 a	10 a	Pass	10 a	Pass	0.0008 g	*

DWS Best Scope Uc value utilized

Tolerance: +/- 0.001% of applied load or +/- Resolution (x2), which ever is greater

As Found 1 0.0001 g 0.0000 g 2 0.0000 g 0.0000 g 3 0.0000 g 0.0000 g 4 0.0000 g 0.0000 g Max Error Max Error 3 2 4		t Load: 50 g	Tolerance:	0.0005 g	
Max Error Max Error 3 4	2	0.0001 g 0.0000 g 0.0000 g	0.0000 g 0.0000 g 0.0000 g	2 1	4
0.0001 g 0.0000 g Status Status Pass Pass 2 1		0.0001 g <u>Status</u>	0.0000 g <u>Status</u>		1

Serial Number	<u>Certificate</u>	Last Cal	Next Ca
094K	2533150C	01/25/17	01/31/18
0U2T	2564892F	03/20/17	03/31/19
S5000	2555591A	02/27/17	02/28/18
1GEC	2397243A	02/09/16	02/28/18

Data Weighing Systems certifies the following equipment was tested and calibrated with standards traceable through NIST to the International System of Units (SI). Subject standards meet the tolerance requirements ASTM E617 (Table 1.0), or NIST HB 105-1 (Table 2-Metric), (Table 3-Avoirdupois) or (Table 4-Apothecary). The determination of a Pass/Fail condition is the opinion of DWS based on experience and established procedures. Measurement Uncertainty is not considered in this determination. Measurement Uncertainty K=2 (≈95%). This form not to be duplicated without written permission of DWS.

Calibration performed, verified functionality and adjusted as appropriate for measurement errors.

Technician Comment: Equipment Comment: 12

DWS seeks your feedback, please email our quality department: quality@dataweigh.com

Adrian Garcia DWS Calibration Technician(s): **DWS Quality Manager**

or deligate, review and approval:

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007





Calibration Certificate

42902406-15 Certificate Number:

EPA Centrational Regional Lab

US Environmental Protection Agencey Customer Address:

Chicago, IL 60605

Customer Code: **EPA311**

Device Location: RM 1004

Customer Equipment

DWS ID# Customer ID#

13

Type of Device

Device Under Test:

Manufacturer

Sartorius

Model CPA124S

25150424

DWS Sales Order: 109759

Calibration Date: 06/07/17

Serial Number

Calibration Procedure: A04L

Test Location: Customer Site

6/20/2018

120 x 0.0001 g

Capacity

Next Cal

01/31/18

03/31/19

Span Test Test Load

027A

100 g 0.001 a 0.0005 g 50 g 10 g

0.0002 g

Tolerance

100 g 50 g 10 g

As Found

Pass **Pass** Pass

Status

100 q Pass 50 g **Pass Pass** 10 g

Status

As Left

0.0008 a0.0008 g 0.0008 g

+/- (Uc) K=2(≈95%)

DWS Best Scope Uc value utilized

Tolerance: +/- 0.001% of applied load or +/- Resolution (x2), which ever is greater

Off-Center Load Test

Test Load: 50 g Tolerance: 0.0005 g As Found As Left 0.0000 g 0.0000 g 2 0.0000 g 0.0000 g 0.0000 g 0.0000 g 3 0.0000 g 0.0000 g

Max Error Max Error 0.0000 a 0.0000 q Status

Status Pass **Pass** 3

Repeatability Test Test Load: 50 g

> As Left 50.0000 g 2 50.0000 g 50.0000 g

> > Standard Deviation 0 g

DWS Standards Utilized

Serial Number Certificate Last Cal 094K 2533150C 01/25/17 0U2T 2564892F 03/20/17 S5000 2555591A 02/27/17

02/28/18 02/09/16 02/28/18 1GEC 2397243A

Data Weighing Systems certifies the following equipment was tested and calibrated with standards traceable through NIST to the International System of Units (SI). Subject standards meet the tolerance requirements ASTM E617 (Table 1.0), or NIST HB 105-1 (Table 2-Metric), (Table 3-Avoirdupois) or (Table 4-Apothecary). The determination of a Pass/Fail condition is the opinion of DWS based on experience and established procedures. Measurement Uncertainty is not considered in this determination. Measurement Uncertainty K=2 (≈95%). This form not to be duplicated without written permission of DWS.

Calibration performed, verified functionality and adjusted as appropriate for measurement errors.

Technician Comment: Equipment Comment: 13

DWS seeks your feedback, please email our quality department: quality@dataweigh.com

DWS Calibration Technician(s):

Adrian Garcia

DWS Quality Manager or deligate, review and approval:

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007

Sales: 1 (800) 397-6301

Calibration: 1 (847) 437-8106

Website: www.dataweight.com





Calibration Certificate

Certificate Number: 42902406-16

EPA Centrational Regional Lab

Customer Address: US Environmental Protection Agencey

Chicago, IL 60605

Customer Code: EPA311

Device Location:

DWS Sales Order: 109759

Test Location: Customer Site

Calibration Procedure: A04L

Calibration Date: 06/07/17

6/20/2018

Customer Equipment

DWS ID# Customer ID#

Type of Device

Manufacturer

<u>Model</u>

Serial Number

Capacity

028A 26

Device Under Test:

Sartorius

Secura224-1S

32150046

220 x 0.0001 g

Span Test							
Test Load	Tolerance	As Found	<u>Status</u>	As Left	<u>Status</u>	+/- (Uc) K=2(≈95%)	
200 g	0.002 g	200.0002 g	Pass	200 g	Pass	0.0013 g	
100 g	0.001 g	100 g	Pass	100 g	Pass	0.0008 g	*
20 g	0.0002 g	19.9999 g	Pass	20 g	Pass	0.0008 g	*

* DWS Best Scope Uc value utilized

Tolerance: +/- 0.001% of applied load or +/- Resolution (x2), which ever is greater

Off-Center Load Test Load:		Tolerance:	0.001 g	
As F	ound	As Left	3	
1 0.00	000 g	0.0000 g	2	ا ا
2 0.00	000 g	0.0000 g	4	4
3 0.00	000 g	0.0000 g	1	
4 0.00	000 g	0.0000 g	_	•
Max	Error	Max Error	3	4
0.00	000 g	0.0000 g		
<u>s</u>	Status .	<u>Status</u>		
	Pass	Pass	2	1
Doto Wajahina S	'votomo oosti	fina tha fallawi		

	tability Test pad: 100 g
	As Left
1	100.0000 g
2	100.0000 g
3	100.0001 g
<u> </u>	Standard Deviation 0.00005774 g

DWS Standards Utilized									
Serial Number	<u>Certificate</u>	Last Cal	Next Cal						
094K	2533150C	01/25/17	01/31/18						
0U2T	2564892F	03/20/17	03/31/19						
S5000	2555591A	02/27/17	02/28/18						
1GEC	2397243A	02/09/16	02/28/18						

Data Weighing Systems certifies the following equipment was tested and calibrated with standards traceable through NIST to the International System of Units (SI). Subject standards meet the tolerance requirements ASTM E617 (Table 1.0), or NIST HB 105-1 (Table 2-Metric), (Table 3-Avoirdupois) or (Table 4-Apothecary). The determination of a Pass/Fail condition is the opinion of DWS based on experience and established procedures. Measurement Uncertainty is not considered in this determination. Measurement Uncertainty K=2 (≈95%). This form not to be duplicated without written permission of DWS.

Calibration performed, verified functionality and adjusted as appropriate for measurement errors.

Technician Comment:

Equipment Comment: RM 1014

DWS seeks your feedback, please email our quality department: quality@dataweigh.com

DWS Calibration Technician(s):

Adrian Garcia

DWS Quality Manager or deligate, review and approval:

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007

Page 1 of 1

Calibration: 1 (847) 437-8106

Website: www.dataweight.com

Sales: 1 (800) 397-6301





Calibration Certificate

Certificate Number: 42902406-17

EPA Centrational Regional Lab

Customer Address: US Environmental Protection Agencey

Chicago, IL 60605

Customer Code: EPA311

Device Location:

25

DWS Sales Order: 109759

Test Location: Customer Site

Calibration Procedure: A04L

Calibration Date: 06/07/17

6/20/2018

Customer Equipment

029A

DWS ID# Customer ID#

<u>Customer ID#</u> <u>Type of Device</u>

<u>Manufacturer</u>

<u>Model</u>

Serial Number

Capacity

220 x 0.0001 g

Device Under Test: Sartorius Secura224-1S 32050346

Span Test							
Test Load	Tolerance	As Found	<u>Status</u>	As Left	<u>Status</u>	+/- (Uc) K=2(≈95%)	
200 g	0.002 g	200.0006 g	Pass	200 g	Pass	0.0013 g	
100 g	0.001 g	100.0004 g	Pass	100 g	Pass	0.0008 g	r
20 a	0.0002 a	20 0001 a	Pacc	20 a	Page	0.0008 a *	r

* DWS Best Scope Uc value utilized

Tolerance: +/- 0.001% of applied load or +/- Resolution (x2), which ever is greater

	enter Load Test est Load: 100 g	Tolerance: 0.001 g	
	As Found	As Left 3	\
1	0.0001 g	0.0000 g	4 l
2	0.0000 g	0.0000 g	١.
3	0.0000 g	0.0000 g 1	
4	-0.0001 g	0.0000 g	
	Max Error	Max Error 3	4
	0.0001 g	0.0000 g	
	<u>Status</u>	<u>Status</u>	
	Pass	Pass 2	1
Data '	Weighing Systems ce	rtifies the following equipmer	ıt was

	tability Test pad: 100 g
1 2 3	As Left 100.0000 g 100.0000 g 100.0000 g
<u> </u>	Standard Deviation 0 g

Serial Number	ilized Certificate	Last Cal	Next Cal
094K	2533150C	01/25/17	01/31/18
0U2T	2564892F	03/20/17	03/31/19
S5000	2555591A	02/27/17	02/28/18
1GEC	2397243A	02/09/16	02/28/18

Data Weighing Systems certifies the following equipment was tested and calibrated with standards traceable through NIST to the International System of Units (SI). Subject standards meet the tolerance requirements ASTM E617 (Table 1.0), or NIST HB 105-1 (Table 2-Metric), (Table 3-Avoirdupois) or (Table 4-Apothecary). The determination of a Pass/Fail condition is the opinion of DWS based on experience and established procedures. Measurement Uncertainty is not considered in this determination. Measurement Uncertainty K=2 (≈95%). This form not to be duplicated without written permission of DWS.

Calibration performed, verified functionality and adjusted as appropriate for measurement errors.

Technician Comment:

Equipment Comment: RM 1014

DWS seeks your feedback, please email our quality department: quality@dataweigh.com

DWS Calibration Technician(s):

Adrian Garcia

DWS Quality Manager
or deligate, review and approval:

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007

Page 1 of 1





Certificate Number: 42902406-18

Customer Name: EPA Centrational Regional Lab

US Environmental Protection Agencey Calibration Procedure: A04L

Chicago, IL 60605

Customer Code: EPA311 6/20/2018

Device Location:

Customer Address:

Customer Equipment

DWS ID# Customer ID# Type of Device Manufacturer Model Serial Number Capacity

030A Device Under Test: Sartorius MSE2202S-100-00 33110477 2200 x 0.01 g

Span Test							
Test Load	<u>Tolerance</u>	As Found	<u>Status</u>	As Left	<u>Status</u>	+/- (Uc) K=2(≈95%)	
2000 g	0.02 g	2000 g	Pass	2000 g	Pass	0.0310 g	*
1000 g	0.02 g	1000 g	Pass	1000 g	Pass	0.0310 g	*
100 g	0.02 g	100 g	Pass	100 g	Pass	0.0310 g	*

* DWS Best Scope Uc value utilized

DWS Sales Order: 109759

Calibration Date: 06/07/17

Test Location: Customer Site

Tolerance: +/- 0.001% of applied load or +/- Resolution (x2), which ever is greater

Off-Cent	er Load Test			Repea	atability Test				
Test	Load: 1000 g	Tolerance:	0.02 g	Test L	oad: 1000 g	DWS Standards Ut	ilized		
						Serial Number	Certificate	Last Cal	Next Cal
	As Found	As Left	3		As Left	094K	2533150C	01/25/17	01/31/18
1	0.00 g	0.00 g		1	1000.00 g	0U2T	2564892F	03/20/17	03/31/19
2	0.00 g	0.00 g	2 4	2	1000.00 g	S5000	2555591A	02/27/17	02/28/18
3	0.00 g	0.00 g	$\setminus 1$	3	1000.00 g	1GEC	2397243A	02/09/16	02/28/18
4	0.00 g	0.00 g	_						
	Max Error	Max Error	3 4						
	0.00 g	0.00 g			Standard Deviation				
	<u>Status</u>	<u>Status</u>			0 g				
	Pass	Pass	2 1						
			-	•		•			

Data Weighing Systems certifies the following equipment was tested and calibrated with standards traceable through NIST to the International System of Units (SI). Subject standards meet the tolerance requirements ASTM E617 (Table 1.0), or NIST HB 105-1 (Table 2-Metric), (Table 3-Avoirdupois) or (Table 4-Apothecary). The determination of a Pass/Fail condition is the opinion of DWS based on experience and established procedures. Measurement Uncertainty is not considered in this determination. Measurement Uncertainty K=2 (≈95%). This form not to be duplicated without written permission of DWS.

Calibration performed, verified functionality and adjusted as appropriate for measurement errors.

Technician Comment:

Equipment Comment: RM 1033

DWS seeks your feedback, please email our quality department: quality@dataweigh.com

DWS Calibration Technician(s):

Adrian Garcia

DWS Quality Manager
or deligate, review and approval:

Data Weighing Systems - 2100 Landmeier Rd - Elk Grove Village IL 60007

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